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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/604,571      | 07/31/2003  | Chieh-Po Chen        | 10676-US-PA         | 1570             |

31561 7590 10/15/2004

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE  
7 FLOOR-1, NO. 100  
ROOSEVELT ROAD, SECTION 2  
TAIPEI, 100  
TAIWAN

EXAMINER

NGUYEN, THANH NHAN P

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2871     |              |

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                             |                     |  |
|------------------------------|-----------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>      | <b>Applicant(s)</b> |  |
|                              | 10/604,571                  | CHEN ET AL.         |  |
|                              | <b>Examiner</b>             | <b>Art Unit</b>     |  |
|                              | (Nancy) Thanh-Nhan P Nguyen | 2871                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### Specification

The disclosure is objected to because of the following informalities:

Paragraph [0016] presently read as "... it is further includes a common electrode, directly being formed on the BM *an* the color film layer" which the examiner suggests it should be rewritten to "... it is further includes a common electrode, directly being formed on the BM *and* the color film layer."

Appropriate correction is required.

Paragraph [0027] presently read as "In FIG. 3, the color filter 300..." which the examiner suggests it should be rewritten to "In FIG. 3, the color filter 200..."

Appropriate correction is required.

Paragraphs [0029], [0035], [0036] presently read as "*0 1.0 micron*" and "*0 6.0 micron*" which the examiner suggests it should be rewritten to "*0 – 1.0 micron*" and "*0 – 6.0 micron.*"

Appropriate correction is required.

### Claim Objections

Claim 1 is objected to because of the following informalities:

Claim 1 presently read as "... wherein a width a of an overlapping region between the color film layers and the BM is *0 6.0 microns*, and a thickness b of the color film layers at the overlapping region is *0 1.0 microns*" which the

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examiner suggests it should be rewritten to "... wherein a width a of an overlapping region between the color film layers and the BM is *0 – 6.0 microns*, and a thickness b of the color film layers at the overlapping region is *0 – 1.0 microns*."

Appropriate correction is required.

**Claim Rejections - 35 USC § 112**

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claim 7 is rejected under 35 U.S.C. 112, second paragraph**, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Here, the use of word "type" makes the claim indefinite. It seems that any arrangement could be construed as one of the listed types. Therefore, for examination purpose, claim 7 would be interpreted as no more than the structure of claim 6, wherein the red film layers, the green film layers, and the blue film layers arrangement is met by any reference.

**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al U.S. Patent Application Publication No. 2003/0118921 in view of Nishida et al U.S. Patent Application Publication No. 2002/0159016.**

Referring to claim 1, Chen et al discloses a structure of color filter, comprising a substrate 10; a black matrix 12 disposed over the substrate, wherein the black matrix includes grid regions exposing the substrate; a plurality of color film layers 41, 141, 241 disposed within the grid regions, [see figure 1K].

Chen et al also discloses the thickness of the color filter layer, preferably, is 0.2 – 1.2 microns, [see page 2, paragraph 0021]. It has been judicially determined that overlapping ranges are at least obvious. This range, 0 – 1.0 microns is the thickness of the color filter layers overlapping the black matrix, would have been obvious to one of ordinary skill in the art. Further, subtraction the thickness of the black matrix strengthens the argument.

Still referring to claim 1, Chen et al lacks of disclosing the width of an overlapping region between the color film layers and the black matrix is 0 – 6.0 microns. However, it is evidenced by Nishida et al.

It was well known that the smaller the width of the black matrix is, the higher aperture the liquid crystal display device gets. Nishida et al discloses the width of the black matrix is 6.0 microns, [see figure 2], providing evidence of this

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assertion. Therefore, the width of overlapping range 0 – 6.0 microns between the color filter layers and the black matrix would have been obvious to one of ordinary skill in the art. Therefore, at the time the invention was made, it would have been obvious to a person of ordinary skill in the art to have the width of an overlapping region between color film layers and the black matrix is 0 – 6.0 microns for the benefit of preventing leakage light and having high aperture.

Referring to claim 2, Chen et al discloses the thickness of the color film layers is greater than the thickness of the black matrix, [see figure 1K].

Referring to claim 3, Chen et al discloses the substrate is a transparent substrate, [see page 1, paragraph 0016, and figure 1K].

Referring to claim 4, Chen et al discloses the black matrix includes light shielding resin, [see page 2, paragraph 0033, and figure 1K].

Referring to claim 5, Chen et al discloses the black matrix includes Cr metal, [see page 2, paragraph 0033, and figure 1K].

Referring to claims 6 and 7, Chen et al discloses the color film layers comprises red film layers 41, green film layers 141, and blue film layers 241, [see page 2, paragraph 0023, and figure 1K].

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Referring to claims 8 and 9, Chen et al discloses a structure of color filter further comprising a common electrode 46, wherein the common electrode includes indium tin oxide, directly disposed on the black matrix and the color film layers, [see page 2, paragraph 0023, and figure 1K].

Claim 10 is met the discussion regarding claims 1 and 8 rejection above.

Claim 11 is met the discussion regarding claims 1-2, and 8 rejection above.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Chen et al U.S. Patent Application Publication No. 2003/0118921 discloses the thickness of the color film layers, and the thickness of the color film layers is greater than the thickness of the black matrix.

Nishida et al U.S. Patent Application Publication No. 2002/0159016 discloses the width of the black matrix.

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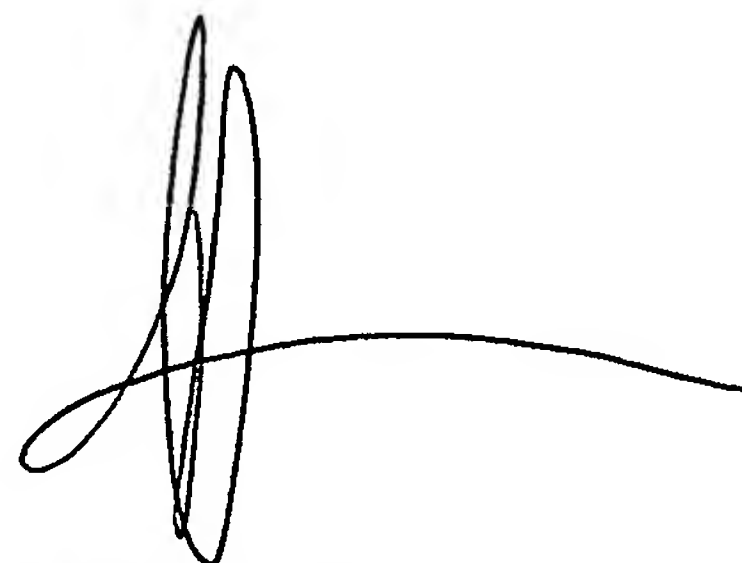
Any inquiry concerning this communication or earlier communications from the examiner should be directed to (Nancy) Thanh-Nhan P Nguyen whose telephone number is 571-272-1673. The examiner can normally be reached on M-F/9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

(Nancy) Thanh-Nhan P Nguyen  
Examiner  
Art Unit 2871

TN

A handwritten signature in black ink, consisting of a large, stylized 'K' followed by a horizontal line extending to the right.

**KENNETH PARKER  
PRIMARY EXAMINER**